

WHAT IS CLAIMED IS:

1. An active sampler for liquids, comprising:
an inlet tube;
an outlet tube;
a sampling unit positioned between said inlet and outlet tubes such that a liquid flows along a path from the inlet tube, through the sampling unit, to the outlet tube, said sampling unit comprising a plurality of sampling chambers which are substantially fluidly sealed relative to one another, one of the chambers being positioned in said flow path; and
an actuator which relatively moves said sampling unit and said path such that said one sampling chamber is positioned out of said flow path while another of the chambers is positioned in the flow path.
2. The active sampler of Claim 1, wherein the liquid is water.
3. The active sampler of Claim 1, wherein said sampler is valveless.
4. The active sampler of Claim 1, wherein said chambers have a tubular shape.
5. The active sampler of Claim 1, wherein the inlet tube comprises a manifold having multiple inlet ports.
6. The active sampler of Claim 1, wherein the sampling unit is a cartridge.
7. The active sampler of Claim 6, wherein the cartridge is a revolving carousel.
8. The active sampler of Claim 7, wherein the plurality of sampling chambers are substantially fluidly sealed relative to one another by O-rings disposed at the ends of each chamber.
9. The active sampler of Claim 1, wherein each sampling chamber is filled with a sorbent material.
10. The active sampler of Claim 9, wherein the sorbent material is Ambersorb[®].
11. The active sampler of Claim 1, wherein the sampling chambers are filled with sorbent cartridges.
12. The active sampler of Claim 1 further comprising screens disposed at the ends of each chamber.

13. The active sampler of Claim 1, wherein the actuator relatively moves said sampling unit and said path using a Geneva mechanism.

14. The active sampler of Claim 1 further comprising a pump configured to pump liquid through said path.

15. The active sampler of Claim 14, wherein the pump comprises a pair of rotatable members that pump said liquid flow by rotating at different rates in the same direction.

16. The active sampler of Claim 14 further comprising a battery adapted to power said pump and said actuator.

17. An active sampler for liquids, comprising:

a plurality of sampling chambers; and

a pump selectively connected to one of the chambers and configured to pump liquid through said chamber, said pump capable of pumping at a rate of at least 10 ml/min while drawing a current of no more than 30 mA without a pressure drop.

18. The active sampler of Claim 17, wherein the sampler is valveless.

19. The active sampler of Claim 17, wherein the pump is disposed downstream from the sampling chambers.

20. The active sampler of Claim 17, wherein the pump comprises a pair of rotatable members, which pump said liquid flow by rotating at different rates in the same direction.

21. A sampler for liquids, comprising:

a sealed housing containing:

a pump;

a sampling unit comprising a sampling chamber;

a battery for supplying power to the pump; and

a circuit which controls the pump,

said housing comprising a pair of contacts which are exposed such that immersion of the housing in liquid lowers the electrical resistance between the contacts, said circuit sensing said lowered resistance and starting said pump after sensing said lowered resistance.

22. A method for actively sampling a body of liquid, comprising:
providing a valveless sampler defining a flow path therethrough and comprising a sampling unit having a plurality of sampling chambers removably housing a sampling media therein;
selectively placing one of the sampling chambers and the flow path in communication with each other; and
passing liquid through the flow path.
23. The method of Claim 22, wherein the sampling unit is removable.
24. The method of Claim 23, further comprising the steps of:
removing the sampling unit from the sampler; and
extracting the plurality of sampling chambers at the same time.